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Review of: Les origines de la Societe de Physique et d'Histoire Naturelle (1790-1822): La science genevoise face au modele francais by Rene Sigrist

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Bénédict de Saussure. (Studia Halleriana, 3.) 507 pp., illus., index. Bern/Stuttgart: Hans Huber Publishers, 1990. SFr 78, DM 88.

Letters in the eighteenth century provided a means to announce new discoveries, collaborate, and encourage younger colleagues. The correspondence between Albrecht von Haller and Horace-Bénédict de Saussure, meticulously edited by Otto Sonntag, is of value in illuminating aspects of the career and character of Haller's younger Genevan disciple.

The correspondence begins in 1760, when Haller was fifty-one and in the midst of the arduous task of publishing his major work, *Elementa physiologiae corporis humani*. Haller had recently returned to his native Bern after seventeen years as a prominent professor of anatomy, botany, and surgery at the University of Göttingen. Saussure, a mere twenty-year-old, was about to embark on a distinguished career as a geologist and Alpine explorer. When he competed for the chair of philosophy in 1762, Saussure received Haller's strong public endorsement, a decisive factor in his election.

A common interest in Swiss flora inspired their first letters. Dry botanical reports are enlivened by their opinions of fellow scientists. For example, they complained that Linnaeus was both arrogant and inexact. They had a low opinion of Buffon's materialism, though Saussure surprised Haller when he reported from Paris that Buffon's behavior was friendly and open, unlike that of other French "*demisavants*," who seemed fearful they might let slip the kernel of a discovery. The letters mention Saussure's investigations of the problems of generation, no doubt stimulated by the work of Buffon and John Turberville Needham. Many letters are devoted to discussions of the political troubles in Geneva in the 1760s, including the meddling of Voltaire and the pernicious influence of Rousseau's *Social Contract*. Others are more personal, reflecting Saussure's desire to obtain Haller's medical opinion on the various illnesses of family members.

The correspondence ends in 1777, three months before Haller's death. In all, Haller and Saussure exchanged about 410 letters, of which Sonntag was able to find 331. Missing letters are numbered and probable dates indicated at the appropriate chronological points in the text.

Sonntag's editing is impeccable. He has preserved Haller's idiosyncratic spelling, yet the letters are clear and comprehensible. His notes are informative without overwhelming the texts. He explains Genevan idioms and references to Genevan institutions. Compared to *The Correspondence between Albrecht von Haller and Charles Bonnet* (Bern: Hans Huber, 1983), also edited by Sonntag, Haller's letters to Saussure are shorter and more matter-of-fact. They lack the intense theoretical and religious discussions characteristic of his communications with Bonnet. However, the Haller-Saussure correspondence is rich in details of the period and sheds on Saussure's character and life a light unavailable from other sources.

VIRGINIA P. DAWSON

René Sigrist. *Les origines de la Société de Physique et d'Histoire Naturelle (1790–1822): La science genevoise face au modèle français*. (Mémoires de la Société de Physique et d'Histoire Naturelle de Genève, 45[1].) viii + 236 pp., illus., figs., apps., bibl., index. Geneva: Société de Physique et d'Histoire Naturelle de Genève, 1990. (Paper.)

In August 1791 seven *bourgeois* of Geneva who cultivated "by taste one or several branches of natural history" sat down to form a society. Within a few weeks five new members swelled the ranks to twelve. Among the founding dozen were Marc-Auguste Pictet, Jean Sénebier, and Horace-Bénédict de Saussure. René Sigrist's handsomely illustrated commemorative volume traces the history of the Société de Physique et d'Histoire Naturelle (SPHN) through its first three decades.

In the closing decades of the eighteenth century, Genevan science experienced a little golden age reminiscent of the Scottish Enlightenment. The founding of the SPHN was one manifestation of the new importance of science at Geneva. Others were the establishment of a chair of experimental physics at the Academy of Geneva and the success of the Pictets' periodical, *Bibliothèque Britannique*, a conduit for the dissemination of British science to the French-speaking world.

Sigrist's book is far more than a history of the SPHN. He devotes considerable attention to the research of the early members of the society and their roles in the scientific controversies of the time (e.g., arguments over the design of meteorological instruments, vaccination, stones that fall from the sky, and

the nature of thermal equilibrium). Especially valuable are Sigrist's analysis of the social context of Genevan science and the discussion of Geneva's links with French science, which changed markedly with annexation.

This book joins a trio of recent studies of Genevan scientific institutions: Cléopâtre Montandon's sociological study of scientific networks involving Genevans (*Le développement de la science à Genève aux XVIIIe et XIXe siècles* [Delta, 1975]); David Bickerton's dissertation on the *Bibliothèque Britannique* (*Marc-Auguste and Charles Pictet and the* Bibliothèque Britannique *(1796–1815) and the Dissemination of British Literature and Science on the Continent* [Slatkine Reprints, 1986]); and a survey, edited by Jacques Trembley, of the history of science in Geneva (*Les savants genevois dans l'Europe intellectuelle du XVIIe au milieu du XIXe siècles* [Editions du Journal de Genève, n.d., but ca. 1989]). The materials are therefore in hand for more specialized studies of Genevan scientists.

And Sigrist clearly meant his history to be used. It is meticulously documented and based upon the voluminous manuscript sources at Geneva. A dozen useful appendixes include a list of members of the SPHN from 1791 to 1822, a list of memoirs read at the meetings, and a list of *savants de passage* at Geneva. The last allows us to check on Rumford's visit to Geneva (in 1803), or to trace the comings and goings of Dolomieu (1795, 1796, 1801). (This list of foreign visitors would have been even more useful if it had been furnished with the same level of documentation as the main text.) Another appendix lists Genevan savants born before 1846, divided conveniently, though cruelly, into three parts headed "Scientifiques de premier plan," "Savants de second plan," and "Amateurs de science." The division was made, we are told, according to the criteria of Montandon.

JAMES EVANS

■ Nineteenth Century

Mary P. Winsor. *Reading the Shape of Nature: Comparative Zoology at the Agassiz Museum.* (Science and Its Conceptual Foundations.) xviii + 324 pp., illus., figs., bibl., index. Chicago/London: University of Chicago Press, 1991. $49.95, £39.95 (cloth); $21.95, £17.50 (paper).

In this fine study, Mary P. Winsor focuses on the history of Harvard's Museum of Comparative Zoology to analyze the achievements of Louis and Alexander Agassiz, the changing status of systematics, and the relationship between museums and scientific research. Much of the emphasis is on Louis Agassiz, the brilliant immigrant scientist who believed that comparative zoology could unlock the true meaning of taxonomic categories and that a museum for this science could provide evidence of organic similarities and lead scientists and laymen to an appreciation of the Creator. Winsor deftly describes Agassiz's vision for comparative zoology and captures the excitement he inspired in a generation of students who embraced his ideas and worked to make his museum a reality.

Winsor is well aware of the ambiguities of Agassiz's legacy and concentrates on explaining why his vision for a discipline of comparative zoology ultimately failed. His conception of taxonomic categories was vacuous, and after 1870 evolutionary theory eclipsed his effort to explain similarities among embryos, adults, and fossil forms. His students' enthusiasm exploded into antipathy when Agassiz, who understood publications as a form of property, even capital, sought to control their work. Winsor also explains how comparative zoology and the museum became peripheral to the work done in biology. Late nineteenth-century emphases on cytology and laboratory research made museum collections and systematics increasingly irrelevant. While Hermann Hagen and Walter Faxon produced sound studies of crayfish systematics, they had little interest in evolutionary questions, and most biologists ignored their work. E. L. Mark developed a biology program at Harvard, but his students made little use of the museum collections or marine specimens at Alexander Agassiz's Newport laboratory.

Significantly, Winsor indicates that the divorce between systematics and other fields derived from more than conceptual or methodological differences. Alexander's loyalty and money enabled the museum to survive, but his proprietary attitude alienated other scientists. University courses were taught in the museum, but Alexander substituted professional assistants for student workers and effectively severed the connection between